

I. AMENDMENTS

AMENDMENTS TO THE CLAIMS

Cancel claims 1-6 without prejudice to renewal.

Please enter new claims 29-41, as shown below.

1.-6. (Cancelled)

19-28 W/D

7-18, 29-41 P/R

DRWG TAT-Ac
CONSENSUS SEQ

7. (Original) An immunogenic composition comprising an acetylated immunodeficiency virus Tat polypeptide, wherein said polypeptide comprises at least one acetylated lysine residue; and a pharmaceutically acceptable excipient.

8. (Original) The immunogenic composition of claim 7, wherein said polypeptide is a human immunodeficiency virus-1 Tat polypeptide, and wherein said acetylated lysine is Lys-50.

9. (Original) The immunogenic composition of claim 7, wherein said polypeptide comprises the amino acid sequence as set forth in any one of SEQ ID NOs:1-23.

which isolate
are there?

10. (Original) The immunogenic composition of claim 7, wherein said polypeptide comprises the amino acid sequence Ser-Tyr-Gly-Arg-acetylated Lys-Lys-Arg-Arg-Gln-Arg-Cys (SEQ ID NO:03).

S T G R K K R R Q R C

11. (Original) The immunogenic composition of claim 7, wherein said polypeptide comprises the amino acid sequence Ser-His-Gly-Arg-acetylated Lys-Lys-Arg-Arg-Gln-Arg-Cys (SEQ ID NO:04).

S H G R K K R R Q R C

12. (Original) The immunogenic composition of claim 7, wherein said polypeptide is linked to a carrier. (ICLH)

13. (Original) The immunogenic composition of claim 12, wherein said polypeptide is linked directly to the carrier. (ICLH)

14. (Original) The immunogenic composition of claim 12, wherein said polypeptide is linked to said carrier through a linker.

15. (Original) The immunogenic composition of claim 12, wherein said carrier is selected from a protein, a polysaccharide, a polyamino acid, an inactivated bacterial toxin, an inactivated bacterium, an inactivated viral particle, a lipid, and a liposome.

16. (Original) The immunogenic composition of claim 12, wherein said carrier is selected from tetanus toxoid, diphtheria toxoid, purified protein derivative of *Mycobacterium tuberculosis*, and inactivated exotoxin A from *Pseudomonas aeruginosa*.

17. (Original) The immunogenic composition of claim 7, further comprising an adjuvant.

18. (Original) The immunogenic composition of claim 17, wherein the adjuvant is an aluminum salt adjuvant.

19. (Withdrawn) A method of inducing an immune response to human immunodeficiency virus-1 (HIV-1) Tat protein in an individual, the method comprising administering an acetylated Tat protein in an amount effective to induce an immune response to HIV Tat protein.

20. (Withdrawn) The method of claim 19, wherein said acetylated Tat protein is coupled to a carrier.

21. (Withdrawn) The method of claim 19, wherein said acetylated Tat protein is administered in a formulation comprising an adjuvant.

22. (Withdrawn) The method of claim 19, wherein said acetylated Tat protein is administered systemically.

23. (Withdrawn) The method of claim 22, wherein said acetylated Tat protein is administered subcutaneously.

24. (Withdrawn) A method of inhibiting transcriptional activation of human immunodeficiency virus (HIV), the method comprising administering an acetylated HIV Tat protein to the individual, wherein antibodies to the Tat protein are produced, and wherein said antibodies bind to serum Tat protein and reduce entry of the Tat protein into the cell.

25. (Withdrawn) An isolated antibody that specifically binds acetylated Tat protein.

26. (Withdrawn) The antibody of claim 25, wherein said antibody is a monoclonal antibody.

27. (Withdrawn) The antibody of claim 25, wherein said antibody is a polyclonal antibody.

28. (Withdrawn) The antibody of claim 25, wherein said antibody is a humanized mouse antibody.

29. (New) The immunogenic composition of claim 7, wherein said polypeptide comprises the amino acid sequence set forth in any one of SEQ ID Nos: 1-23.

30. (New) The immunogenic composition of claim 7, further comprising at least a second acetylated immunodeficiency Tat polypeptide.

31. (New) The immunogenic composition of claim 30, wherein said at least second acetylated Tat polypeptide comprises the amino acid sequence set forth in any one of SEQ ID NOs: 1-23.

32. (New) The immunogenic composition of claim 30, wherein said at least second acetylated Tat polypeptide differs from the first acetylated Tat polypeptide amino acid sequence by at least one amino acid.

33. (New) The immunogenic composition of claim 7, further comprising at least a second Tat polypeptide, wherein said at least second Tat polypeptide is not acetylated.

SUPPORT FOR THIS?

6,447,778
6,419,931

34. (New) The immunogenic composition of claim 33, wherein said at least second Tat polypeptide comprises a sequence of amino acid 1 to amino acid 45 of a Tat polypeptide.

35. (New) The immunogenic composition of claim 33 wherein said at least second Tat polypeptide comprises a sequence of amino acid 55 to amino acid 72 of a Tat polypeptide.

36. (New) The immunogenic composition of claim 33, wherein said at least second Tat polypeptide comprises a sequence of amino acid 1 to amino acid 45 and amino acid 55 to amino acid 72 of a Tat polypeptide.

→ FULL LENGTH TAT

37. (New) The immunogenic composition of claim 33 wherein said at least second Tat polypeptide comprises the amino acid sequence set forth in any one of SEQ ID NOs: 28-37.

38. (New) The immunogenic composition of claim 7 wherein the acetylated immunodeficiency TAT polypeptide comprises a lipid residue → WHAT IS A LIPID RESIDUE?

39. (New) The immunogenic composition of claim 7 wherein the acetylated Tat polypeptide is multimerized, wherein the multimerized acetylated Tat polypeptide comprises two or more monomeric Tat polypeptides.

40. (New) The immunogenic composition of claim 39, wherein the monomeric Tat polypeptides are linked directly.

41. (New) The immunogenic composition of claim 39, wherein the monomeric Tat polypeptides are linked via a linker.